(19) EUROPEAN PATENT OFFICE
(11) Publication number (Patent number): 5469471A 19951121US

(21) Application number: US 19051794A
(22) Date of filing: 19940201
(30) Priority:
US 19051794A 19940201 US
19990415 178444ATT 19970904
681771AUB219950821 1836995AUA
19960109 9505642BRA 19950810
2158157CAA119960522 1123073CNA
19990506 69508664DED119991021
69508664DET219991018
692162DKT319960117
0692162EPA119990616
2129810EST319951128 954617FIA
19990831 3030151GRT320000505
1011125HKA119981030 112487ILA
20000228 3014765JPB219960917
8508871JPT 19991201
233782KRB119990320
2127948RUC119951121 5469471USA
19950810 9521494WOA119960207
9500600ZAA
(51) Int. Cl 6H 04J 13/02 A
(52) Ntl. Cl EPH04B7/005

(71) Applicant:
QUALCOMM INC
(72) Inventor:
WHEATLEY III CHARLES E

(54) Method and apparatus for providing a communication link quality indication

(57) Abstract:

A link quality improvement system for a cellular communication system in which portable units are used to facilitate communication of information signals between system users, via at least one cell-site, using code division multiple access spread spectrum communication signals. The system enables users to improve the quality of reverse communication links from the portable units to the cell-site by providing to each system user a link quality signal indicative of power received at the cell-site relative to an optimum level of received power. At a cell-site communicating with a portable unit associated with a particular system user, the portable unit transmitted power is measured as received at the cell-site. A command signal is generated at the cell-site and transmitted to the portable unit for adjusting portable unit transmitter power. The command signals are also accumulated in order to enable generation of a link quality signal in response thereto. In a preferred implementation the link quality signal is an audible interference signal inducing the system user to adjust orientation of the portable communication unit so as to improve signal quality on the reverse link.